

IN THE CLAIMS:

Please AMEND claims 21, 25 and 26, as follows.

1-20. (Canceled)

21. (Currently Amended) An exposure apparatus for exposing a substrate with a pattern of an original, said apparatus comprising:

a projection optical system for projecting the pattern of the original onto the substrate with light from a light source;

an optical path difference applying optical system for dividing light from the light source into two light beams and for re-combining the two light beams;

an optical unit for directing light from said optical path difference applying optical system to a pinhole; and

an interferometer for measuring an optical characteristic of said projection optical system by use of the light from said optical path difference applying optical system which passes [[a]] the pinhole and said projection optical system,

wherein the pinhole is disposed at a focal point position of said optical unit, and wherein the pinhole has a diameter which is smaller than a diameter of an Airy disc.

22. (Previously Presented) An apparatus according to claim 21, wherein the diameter of the pinhole is about a half of the diameter of the Airy disc of the light from said light source.

23. (Previously Presented) An apparatus according to claim 21, wherein the optical characteristic is wavefront aberration.

24. (Previously Presented) An apparatus according to claim 21, wherein said interferometer is a Fizeau interferometer.

25. (Currently Amended) An exposure apparatus for exposing a substrate with a pattern of an original, said apparatus comprising:

a projection optical system for projecting the pattern of the original onto the substrate with light from a light source;

an optical path difference applying optical system for dividing light from the light source into two light beams and for re-combining the two light beams;

an optical unit for directing light from said optical path difference applying optical system to a pinhole; and

a photosensitive element for detecting light from said optical path difference applying optical system which passes ~~[[a]]~~ the pinhole and said projection optical system as an interference signal,

wherein the pinhole is disposed at a focal point position of said optical unit, and
wherein the pinhole has a diameter which is smaller than a diameter of an Airy disc.

26. (Currently Amended) A device manufacturing method, comprising the steps of:

exposing a substrate with a pattern of an original by use of an exposure apparatus;
and
developing the exposed substrate,
wherein the exposure apparatus includes (i) a projection optical system for projecting the pattern of the original onto the substrate with light from a light source, (ii) an optical path difference applying optical system for dividing light from the light source into two light beams and for re-combining the two light beams, and (iii) an optical unit for directing light from the optical path difference applying optical system to a pinhole, and (iv) an interferometer for measuring an optical characteristic of the projection optical system by use of light from the optical path difference applying optical system which passes [[a]] the pinhole and the projection optical system, wherein the pinhole is disposed at a focal point position of the optical unit, and wherein the pinhole has a diameter which is smaller than a diameter of an Airy disc.